IN THE CLAIMS:

1. (Currently Amended) A method of imaging a patterned structure onto a substrate provided with a layer of energy-sensitive material, comprising:

performing a first exposure to image a first pattern;

performing a second exposure to image a second pattern,

wherein at least one of said first and second exposures is performed using an illumination mode having a substantially dipolar intensity distribution, and wherein at least one of said patterns which is imaged using the illumination mode having a substantially dipolar intensity distribution comprises features oriented substantially perpendicular to an axis joining respective two poles of the substantially dipolar intensity distribution.

2. (Original) A method according to claim 1, wherein the other of said first and second exposures is performed using an illumination mode having an intensity distribution which is substantially one of dipolar, quadrupolar, annular and disk-like.

3. (Previously Presented) A method according to claim 1, wherein a first mask having said first pattern is used to define an image formed by said first exposure and a second mask having said second pattern is used to define an image formed by said second exposure.

4. (Previously Presented) A method according to claim 3, further comprising exchanging masks between said first and second exposures.

5. (Previously Presented) A method according to claim 1, wherein a mask having at least said first pattern and said second pattern is used for the first and second exposures, the first pattern is used to define an image formed by the first exposure and the second pattern is used to define an image formed by the second exposure.

6. (Previously Presented) A method according to claim 1, wherein said illumination mode is used to image linear features of the patterned structure oriented substantially perpendicular to an axis joining the respective two poles of said substantially dipolar intensity distribution.

7. (Previously Presented) A method according to claim 6, wherein at least one of a respective mask and a mask sub-pattern is used with said illumination mode exposure and substantially defines only features of the patterned structure oriented substantially perpendicularly to the axis joining the respective two poles of said substantially dipolar intensity distribution.

8. (Previously Presented) A method according to claim 1, wherein said illumination mode has an intensity distribution comprising two relatively intense poles and further comprising at least one of: a relatively weak central pole; two relatively weak further poles; and a general relatively weak background intensity.

9. (Previously Presented) A method according to claim 1, further comprising changing at least one of a pole radial position, size and intensity between said first and second exposures.

10. (Previously Presented) A method according to claim 1, wherein said first and second exposures are both performed using dipolar illumination modes and wherein axes of the two dipolar modes are substantially perpendicular to each other.

11. (Previously Presented) A method according to claim 1, wherein at least one of the exposures performed using an illumination mode having a substantially dipolar intensity distribution, is performed using polarized electromagnetic radiation.

12. (Original) A method according to claim 11, wherein the polarized radiation is linearly polarized.

13. (Previously Presented) A method according to claim 12, wherein the radiation is polarized to have an electric field component oriented substantially perpendicular to an axis joining the respective two poles of the substantially dipole intensity distribution.

14. (Previously Presented) A method according to claim 1, wherein between the first and second exposures, a focus of a pattern on the substrate is adjusted to ensure that both the first and second exposures are performed at a substantially optimum focus.

15. (Previously Presented) A method according to claim 1, wherein at least one of the exposures using an illumination mode having a substantially dipolar intensity distribution is performed using an attenuated phase shift mask.

16. (Previously Presented) A method according to claim 15, wherein an attenuation is chosen to balance an energy of radiation of zeroth- and first-order diffracted beams as they are emerging from said pattern and captured by a projection system used to image the patterns on the substrate.

17. (Previously Presented) A device manufacturing method comprising:

providing a substrate which is at least partially covered by a layer of energy-sensitive material;

providing at least one mask for defining a pattern; and

imaging at least part of said mask pattern onto said substrate using a method according to claim 1.

18. (Withdrawn) A device manufactured in accordance with the method of claim 1.

19. (Withdrawn) An apparatus for imaging a pattern onto a substrate provided with a layer of energy sensitive material, said apparatus comprising:

an illumination system adapted to illuminate a first mask to define a first illumination mode and to illuminate a second mask to define a second illumination mode;

a projection system adapted to image at least parts of said first and second masks onto said substrate to form at least a portion of said pattern; and

a mask changer constructed and arranged to change positions of said first and second masks with respect to said illumination system;

wherein at least one of said first and second illumination modes is a dipolar illumination mode and wherein said apparatus is arranged to image said pattern by at least two exposures using respective first and second illumination modes and said first and second masks.

20. (Withdrawn) An apparatus for imaging a pattern onto a substrate provided with a layer of energy sensitive material, said apparatus comprising:

an illumination system adapted to illuminate a first mask portion to define a first illumination mode and to illuminate a second mask portion to define a second illumination mode;

a projection system adapted to image at least parts of said first and second mask portions onto said substrate to form at least a portion of said pattern; and

a mask mover adapted to move a mask containing said first and second mask portions with respect to the projection system, said mask mover distinctly positioning first and second mask sub-patterns, located at different positions on the mask, in a radiation beam emerging from the illumination system;

wherein at least one of said first and second illumination modes is a dipolar illumination mode and wherein said apparatus is arranged to image said pattern by at least two exposures using respective said first and second illumination modes and mask sub-patterns.

21. (Withdrawn) An apparatus according to claim 19, wherein said illumination system comprises at least one diffractive optical element for defining said first and second illuminations modes.

22. (Withdrawn) An apparatus according to claim 20, wherein said illumination system comprises at least one diffractive optical element for defining said first and second illumination modes.

23. (Previously Presented) A method according to claim 3, wherein said first mask is different from said second mask.

24. (New) A method of imaging a patterned structure onto a substrate provided with a layer of energy-sensitive material, comprising:

performing an exposure to image a pattern using an illumination mode having a substantially dipolar intensity distribution,

wherein the pattern imaged using the illumination mode having the substantially dipolar intensity distribution comprises features oriented substantially perpendicular to an axis joining respective two poles of the substantially dipolar intensity distribution.